

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014870**Date Inspected:** 09-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

CWI Inspector: Mr. Wu Zhi Cheng

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

**OBG Segment Trial Assembly**

ZPMC welder Mr. Peng Jian Cheng, stencil 222396 is using flux cored welding procedure WPS-B-T-2231-T-1 to make repair weld SEG047B-049. This weld joins OBG segments 8BW cross beam side plate to the bottom plate. This work is being performed in accordance with weld repair document B-WR13500 which directs the removal and rewelding of this weld joint and the longitudinal diaphragm in order to correct misalignment of various plates. The welding parameters recorded by ZPMC QC Inspector Mr. Wang Zhu appear to comply with the WPS. This QA Inspector observed that Mr. Peng Jian Cheng appears to be certified to make this weld. Items observed on this date appear to generally comply with applicable contract documents.

ZPMC welder Mr. Zhou Pan, stencil 220063 is using flux cored welding procedure WPS-B-T-2231-T-1 to make repair weld SEG047B-049. This weld joins OBG segments 8BW cross beam side plate to the bottom plate. This work is being performed in accordance with weld repair document B-WR13500 which directs the removal and rewelding of this weld joint and the longitudinal diaphragm in order to correct misalignment of various plates.

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The welding parameters recorded by ZPMC QC Inspector Mr. Wang Zhu appear to comply with the WPS. This QA Inspector observed that Mr. Zhou Pan appears to be certified to make this weld. Items observed on this date appear to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Han Yiaofeng, stencil 054467 is using shielded metal arc procedure WPS-345-SMAW-1G(1F)-Repair-1 to make repair weld SEG049A-013 on OBG Segment 9AW. This repair weld is being made as a result of visual rejections. This QA Inspector measured a welding current of approximately 160 amps, the base material was preheated with a torch prior to welding and Mr. Han Yiaofeng appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zang Yanbo, stencil 045196 is using shielded metal arc welding procedure WPS-345-SMAW-4G(4F)-FCM-Repair to make repair weld SEG039B-001 on OBG Segment 7DW. This work is being performed in accordance with weld repair document B-WR13212 which directs the removal and rewelding of this weld joint to correct distortion of various plates. This QA Inspector measured a welding current of approximately 145 amps, the base material was preheated with a torch prior to welding and Mr. Zang Yanbo appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents. This QA Inspector observed the welding electrodes are being stored in a heated portable electrode storage container. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Cross Beam located in the yard behind bay 14

This QA Inspector observed a ZPMC welder appears to be performing welding inside OBG segment cross beam CB14. When this QA Inspector approached cross beam CB14 the welder stopped welding and left the cross beam.

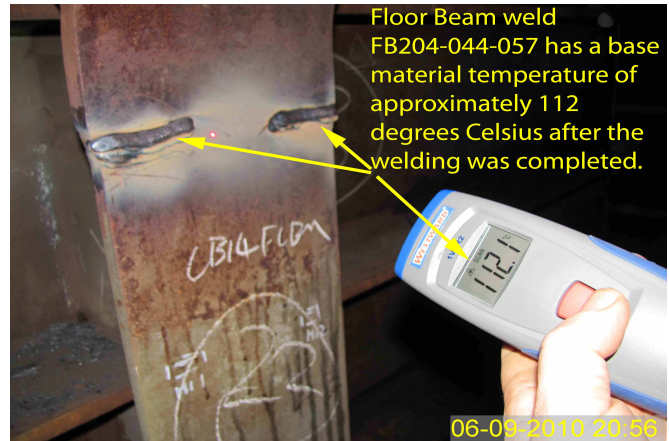
This QA Inspector asked ZPMC QC Inspector (not a CWI) Mr. Wang Zhu and ABF representative Mr. Wang Zhong Yuan if they were aware if anyone was welding in cross beam CB14 and both people said they were not aware of any welding being performed inside cross beam CB14. This QA Inspector observed that an unidentified ZPMC welder appears to have performed weld repairs of ultrasonic rejections of welds FB204-042-057, FB204-043-057 and FB204-044-057 without a Quality Control Certified Welding Inspector being aware of the welding or monitoring this welding. ZPMC QC and ABF personnel were not aware if welding repair documents have been issued for this work and the depth of the weld repairs and other related information does not appear to have been recorded to determine if critical weld repair documents were required and who performed these welding repairs. No acetylene torch or other heating equipment was in the vicinity of the weld repair areas they do not appear to have been preheated prior to welding. The welding machine has a Chinese language label on the top of the machine and ABF representative Mr. Wang Zhong Yuan said the tag indicates this welding machine is assigned to ZPMC welder Mr. Song Wei Rong. The spool of flux cored welding electrode on the FCAW machine has a label that indicates the welding electrode was initially used on May 28, 2010 which is approximately thirteen days ago. This QA Inspector informed ZPMC QC Inspector Mr. Wang Zhu and ABF representative Mr. Wang Zhong Yuan that an incident report is being issued to document the items mentioned above. For additional information, see the attached photographs below.

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### Summary of Conversations:

See Above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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| <b>Inspected By:</b> | Dawson,Paul    |
| <b>Reviewed By:</b>  | Carreon,Albert |

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| Quality Assurance Inspector |
| QA Reviewer                 |

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